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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER

CALDWELL, P

ART UNIT PAPER NUMBER

2755

11

DATE MAILED:

09/17/98

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

**OFFICE ACTION SUMMARY**

Responsive to communication(s) filed on 7-7-98

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**

Claim(s) 1-33 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-33 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

**Application Papers**

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

Notice of Reference Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

**- SEE OFFICE ACTION ON THE FOLLOWING PAGES -**

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## DETAILED ACTION

1. This action is in response to communication which was received 6-26-98.

Claims 1-33 are pending.

### *Specification*

2. The specification is objected to because US Patent Application, Waldo et al, "System and Method for Generating Identifiers for Uniquely Identifying Object Types for Objects Used in Processing of Object-Oriented Programs and the Like", which is incorporated by reference is listed without a serial number. Correction is required.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

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matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 31-33 rejected under 35 U.S.C. 103(a) as being unpatentable over Betz, Mark, "Interoperable objects: laying the foundation for distributed-object computing", Dr. Dobb's Journal, v19, n11, p18(13) in view of ORBIX, The ORBIX Architecture, January 1995.**

As per claims 31 and 32, Betz teaches computer (machine under a single operating system)[page 4 of enclosed copy, lines 14-22], stub code (stub), stub loader (dynamic invocation interface) for controlling computer to load stub into execution environment to make stub available for use in remote invocation [page 3 of enclosed copy, first full paragraph of page; pages 7-8 of enclosed copy, section Architecture of the Orb].

However, Betz does not teach retrieval of stub code.

ORBIX teaches retrieval of stub code (dynamic link loading of stub code into the computer system to allow access of remote objects) [page 18, section The Dynamic Invocation Interface].

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It would have been obvious to modify the system of Betz by implementing retrieval of stub code because it provides it provides a mechanism for dealing with environment differences at runtime.

As per **claim 33**, refer to claim 31 for rejection and combination of references. It would have been obvious to embody these limitations as code store on a computer readable medium and executable by a computer.

5. **Claims 1-3-4, 7-11, 13-14,17-21, 23-24, 27-30 are rejected under 35 U.S.C 103(a) as being unpatentable over Rosenberry , Ward et al, Understanding DCE, Chapters 1-3, 6, 1992 in view of ORBIX, The ORBIX Architecture, January 1995.**

As per **claim 1**, Rosenberry et al teach stub loader for loading stub into execution environment (remote procedure call software which set-ups and performs communication between client and server, including runtime library dispatching call to function for stub, determining hosts addresses and transmitting between the

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addresses) [ pages 42-44, section 3.1.2]. However Rosenberry et al do not explicitly teach a stub retriever.

ORBIX teaches retrieval of stub code (dynamic link loading of stub code into the computer system to allow access of remote objects) [page 18, section The Dynamic Invocation Interface).

It would have been obvious to modify the system of Rosenberry by implementing retrieval of stub code because it provides it provides a mechanism for dealing with environment differences at runtime.

As per **claim 3**, Rosenberry et al in combination with ORBIX teach remote method invocation control (remote procedure call runtime routines) for controlling invocation of remote method [page 43, section Stub Code and Run-time Libraries ...].

As per **claim 4**, Rosenberry et al in combination with ORBIX teach server for processing remote method in response to a processing request, (server receiving remote procedure call), server providing stub in response to a retrieval request (server executing call and passing results back in a server stub) [page 43, section Server Invokes the Remote Procedure].

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As per **claim 7**, Rosenberry et al in combination with ORBIX teach remote server identifier (host address) for providing server identification [page 49, section 3.4.1].

As per **claim 8**, Rosenberry et al in combination with ORBIX teach remote method server identifier (endpoint) [pages 48-49, sections 3.4, 3.4.1. 3.4.2].

As per **claim 9**, Rosenberry et al in combination with ORBIX teach remote method invocation identification (remote procedure calls) for controlling invocation of remote method [page 53, section 3.5, including Figure 3-7].

As per **claim 10**, Rosenberry et al in combination with ORBIX teach nameserver (DCE directory service) for providing server identification and remote server identifier (host address) initiating communication with nameserver to obtain the server identification of remote method (hosts binds with each other) [page 48-50, sections 3.4 through 3.4.4]

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As per claims 11, 13-14, 17-20, refer to claims 1, 3-4, 7-10 for rejection and combination of references. It would have been obvious to embody these limitations as a method.

As per claims 21, 23-24, 27-30, refer to claims 1, 3-4, 7-10 for rejection and combination of references. It would have been obvious to embody these limitations as a computer program product.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2, 5, 6, 12, 15, 16, 22, 25, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberry, Ward et al, Understanding DCE, Chapters 1-3, 6, 1992 and ORBIX in view of Mitchell,**

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**James et al, An Overview of the Spring System, Proceedings of Compcon, February 1994.**

As per claim 2, Rosenberry et al and ORBIX do not teach remote method reference detector for detecting whether remote method reference has been received in execution environment.

Mitchell et al teach a remote method reference detector (server creating an object reference ) [page 5, section 7, last paragraph of page through page 6, line 4].

It would have been obvious to include within the system as taught by Rosenberry et al a method reference detector as taught by Mitchell because its provides the capability of guaranteeing that the correct data is being accessed.

As per claim 5, Rosenberry et al do not teach providing a separate address space for processing remote method from address space provided by execution environment .

Mitchell et al teach separate address space (servers operating in different address spaces from their clients) [page 3, section 3.1].

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It would have been obvious to include with the system as taught by Rosenberry et al the capability of separate address space because it provides a mechanism for protecting applications against interfering with each other.

As per **claim 6**, Rosenberry et al in combination with Mitchell et al teach address space provided by server and execution environment are provided by separate computers (distribution of applications across computer systems) [Rosenberry : page 10, section 1.2.2, first para.; pages 11-12, section 1.2.3, including Figure 1-4].

As per claims **12,15,16**, refer to claims 2,5,6 for rejection and combination of references. It would have been obvious to embody these limitations as a method.

As per claims **22,25,26**, refer to claims 2,5,6 for rejection and combination of references. It would have been obvious to embody these limitations as a computer program product.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pat Caldwell whose telephone number is (703) 305-3805.



LUCIEN U. TOPLU  
PRIMARY EXAMINER